

1.01	<b>DIAGNOSTIC TESTING, MALFUNCTION INDICATION, OR ELECTRICAL CONDITION MEASUREMENT</b>	22.01	..By loopback
1.02	..Of audio message storage and retrieval	22.02	..By analysis of injected tone signal
1.03	..Of data transmission	22.03	..Fault detection or fault location on telephone link (e.g., continuity, leakage)
1.04	..Qualifying line for data transmission	22.04	...Of digital loop carrier
2	..Including fault responsive disconnection of tested component	22.05	....Pair gain test controller
3	..Of hybrid or echo suppressor or canceller	22.06	...Having special connector
4	..Of repeater	22.07	...Telephone multiconducting wires (e.g., tip, ring and ground wires)
7	..For detection of eavesdropping device	22.08	...Noise
8	..With blocking of normal usage	23	..Of line signalling
9	..Of centralized switching system	24	..Electrical parameter measurement (e.g., attenuation)
9.01	..Software compatibility	25	..Conductor identification or location
9.02	..Maintenance console	26.01	..Testing of network terminating interface, subscriber trunk interface, or service function
9.03	..Trouble ticket reporting	26.02	..With a programmable or self-test device
9.04	..Record or report generation	27.01	..Testing of subscriber loop or terminal
9.05	..Backup system	27.02	..By generating call signal
9.06	..Of line interface circuitry	27.03	..By analysis of testing signal
14	..Of plural exchange network	27.04	..By automatic testing sequence (e.g., programmable, test, script or test call generation program)
14.01	...Fault segmentation (e.g., error location in network)	27.05	..Having protection circuit (e.g., surge or short circuit protector)
10.01	..By automatic testing sequence	27.06	..Having electromechanical switch or relay
10.02	...By call generator	27.07	..Having plugging maintenance or test module
10.03	...Script file generation or execution	27.08	..Including sampling measurement technique
11	...Routiner	28	..Of data transmission instrument
12	..With dedicated testing line or trunk	29.01	..Terminal arrangement to enable remote testing (e.g., testing interface)
13	..Of call timing or charging equipment	29.02	...By simulator (e.g., computer simulates testing personnel)
15.01	..Of switching equipment or network element	29.03	...Voltage or current determination
15.02	...Advanced intelligent network (AIN)	29.04	...Voltage or current detector
15.03	....Provisioning of service	29.05	...Metallic loop testing
15.04	....Of plural AIN elements	29.06	...By dialing back the calling terminal
15.05	.....Determining fault location		
16	..Of switching path		
17	..Of switching selector		
18	..By use of call address signal		
19	...Rapid manual connecting structure for test equipment		
20	..Of switchboard element condition (e.g., lamp)		
21	..Using portable test set (e.g., handset type)		
22	..Of trunk or long line		

29.07	...For a fault caused by an off-hook status	51	.With automatic dialing or transmission of recorded audio message
29.08	...For a fault caused by new added service or equipment (e.g., software compatible)	52	<b>INCLUDING AID FOR HANDICAPPED USER (E.G., VISUAL, TACTILE, HEARING AID COUPLING)</b>
29.09	...With historical operating information database	55.1	<b>HAVING NEAR FIELD LINK (E.G., CAPACITIVE, INDUCTIVE)</b>
29.1	..Visual output (e.g., printing, displaying)	56.1	<b>HAVING LIGHT WAVE OR ULTRASONIC LINK FOR SPEECH OR PAGING SIGNAL</b>
29.11	..Having telephone maintenance termination unit (e.g., MTU)	56.2	.Including fiber optic link within telephone network
30	..Loop impedance (e.g., resistance, capacitance)	56.3	.Including infra-red link with landline telephone network
31	..Of line signalling generator (e.g., dial, tone code generator)	67.1	<b>AUDIO MESSAGE STORAGE, RETRIEVAL, OR SYNTHESIS</b>
32.01	.Monitoring	68	.Dynamic audio signal recording or reproduction
32.02	..Trunk or long line	69	..Call originating
32.03	...AIN link	70	..Call intercept or answering
32.04	..Subscriber line	71	...Consecutive use of recorded phrases or words to form message
32.05	..Call tracing	72	...Sequential or repeated announcement during single call initiated cycle
33	..Alarm or emergency (e.g., cut line)	73	...Plural record carrier channels
35	..Listening-in or eavesdropping type	74	...Remote control over telephone line
36	<b>FREE CALLING FROM PAYSTATION</b>	75	...Remote dictation
37	<b>EMERGENCY OR ALARM COMMUNICATIONS (E.G., WATCHMAN'S CIRCUIT)</b>	76	...Announcement selection or replacement
38	..Personal monitoring (e.g., for the ill or infirm)	77	...Control by generated tone
39	..Responsive to sensed nonsystem condition	78	...Acoustic coupling
40	..Automatic dialing	79	...With specified call initiated cycle control circuitry
41	..Transmission of recorded audio message	80	...Voice signal presence responsive
42	..Plural conditions	81	...Call termination responsive (e.g., hang-up)
43	..Fire	82	...Having specified call initiation (e.g., ringing) responsive circuitry
44	..Intrusion	83	...Structural detail of storage medium drive
45	.Central office responsive to emergency call or alarm (e.g., "911", operator position display)	84	...At switching facility (e.g., central office, switchboard)
46	.Called line or station condition responsive (e.g., recall if busy)	85	..Recording of telephone signal during normal operation
47	.Plural alarms over single line	86	...Inductive pickup
48	.Announcement or alarm received at terminal station (e.g., "butt-in", alarm)	87	..Reproduced signal distributed over telephone line
49	.Central station with plural substations	88.01	.Voice activation or recognition
50	.By pulse or digital signal		

88.02	..Voice verification (e.g., voice authorization, voiceprint, etc.)	92.03	..Having central station equipment
88.03	..Voice dialing	92.04	..Having subscriber station equipment
88.04	..Voice controlled message management	93.01	..Having transmission of a digital message signal over a telephone line
88.05	..Multilingual system or operation	93.02	..Access restricting
88.06	..Language selection	93.03	...Personal identification
88.07	..Digital signal processing (DSP)	93.04	...Two or more calls
88.08	..Message signal analysis	93.05	..Terminal interface circuitry
88.09	..Statistical analysis (e.g., time, date, length of message, etc.)	93.06	...Digital
88.1	..Including data compression	93.07	...To plural lines or networks
88.11	..Display of message related information	93.08	..Transmission scheme (e.g., compression/decompression, transmission rate)
88.12	..Indication or notification of message	93.09	..Switching between different terminal types (e.g., voice/data switch)
88.13	..Multimedia system (e.g., voice output combined with fax, video, text, etc.)	93.11	...Among at least three terminal types
88.14	..Presentation format conversion	93.12	..Sales, ordering, or banking system
88.15	..Pager activation	93.13	..Amusement (e.g., game, lottery)
88.16	..Voice message synthesis	93.14	..Having switching station
88.17	..Interaction with an external nontelephone network (e.g., Internet)	93.15	...Having format conversion
88.18	..Interacting voice message systems	93.17	..Having station display
88.19	..Call source identification	93.18	...Having tone code recognition for generating alphanumeric characters
88.2	..Automatic Number Identification (ANI)	93.19	...Having pressure or position sensitive surface (e.g., touch-screen, light pen)
88.21	..Caller identification received at substation	93.21	...Having conferencing
88.22	..Message management	93.22	...At pay station
88.23	..Controlled by subscriber or caller	93.23	...Having user information display (e.g., telephone number, name, address, etc.)
88.24	...By generated tone	93.24	...Having electronic mail
88.25	..Message storage in centralized location (e.g., central office, PBX, etc.)	93.25	...Having remote database (e.g., videotex system)
88.26	...Recording voice message from non subscriber caller	93.26	..By voice frequency signal (e.g., tone code)
88.27	..Separate storage for voice and control information	93.27	...Alphanumeric
88.28	..Solid state memory storage	93.28	...Modulated audio tone
90.01	<b>TELEPHONE LINE OR SYSTEM COMBINED WITH DIVERSE ELECTRICAL SYSTEM OR SIGNALLING (E.G., COMPOSITE)</b>	93.29	...Reconfigurable
91.01	..Credit authorization	93.31	....Protocol
91.02	..At switching station	93.32	.....Initial setup
92.01	..Polling	93.33	.....Having adjustable speed
92.02	..Televoting	93.34	.....Having recognition and selection
		93.35	...Having call-waiting
		93.36	...Line powered
		93.37	...Having acoustic link

100.01	..To produce visual-graphic copy (e.g., facsimile)	112.01	..Call traffic recording by computer or control processor
100.02	..Having detachable device (e.g., detachable storage medium, scanner)	112.02	..Redundant processor or backup processor
100.03	..Usage system	112.03	..Estimating blocking probability
100.04	..Communication charge calculation	112.04	..Threshold or limiting control (e.g., gapping control)
100.05	..Monitoring	112.05	..Optimization network configuration
100.06	..Communication status notification	112.06	..Generalized statistics about telephone network usage
100.07	..Using mark sheet	112.07	...Carrier usage data
100.08	..Electronic mailbox	112.08	...Trunk or path usage data
100.09	..Relay system	112.09	...Specialized exchange
100.11	..From a library	112.1	...Traffic rate for overload
100.12	..Connection to plural networks or lines	114.01	..Call charge metering or monitoring
100.13	..Format conversion	114.02	..Least cost
100.14	..Call signal generation (e.g., auto-dial)	114.03	..Billing computing software or program
100.15	..Having switching to other communication modes	114.04	..Charge error detection
100.16	...Voice mode	114.05	..Special service fees (e.g., customized feature)
100.17	..Transmission scheme	114.06	..Variable rate
101.01	..Audio program distribution	114.07	...Bandwidth
102.01	..Remote control	114.08	...Traffic
102.02	..Communication device	114.09	...Time controlled
102.03	...Entertainment appliance (e.g., TV, VCR, radio, etc.)	114.1	..Incentive billing
102.04	...Power source	114.11	...Gaming
102.05	..Of heating, ventilation, air conditioner (e.g., HVAC)	114.12	...Discount or bargaining
102.06	..Of physical entrance or exit lock	114.13	...Advertisement
102.07	..Having indication	114.14	..Fraud detection or control
106.01	..Remote indication over telephone line (e.g., telemetry)	114.15	..Calling card
106.02	..Patient monitoring	114.16	...Recharging or replenishing an account or calling card
106.03	..Meter reading	114.17	...Monitoring account or card usage balance
106.04	...Having power supply circuitry	114.18	...Having complementary item (e.g., novelty)
106.05	...Having ringing suppression	114.19	...Credit card
106.06	...Having time window	114.2	...Pre-paid calling account or card
106.07	...Having interrogation signal	114.21	..Redirect billing
106.08	...Having line status detection	114.22	...Split billing or cost sharing
106.09	..Ringing suppression	114.23	...Third party billing
106.11	..Interrogation signal	114.24	...1-800 billing
108.01	..Telegraphy	114.25	...1-900 billing
108.02	..Over telephone line	114.26	...Based on unique account code
110.01	<b>COMPOSITE SUBSTATION OR TERMINAL (E.G., HAVING CALCULATOR, RADIO)</b>	114.27	..Portable number billing
111	<b>WITH USAGE MEASUREMENT (E.G., CALL OR TRAFFIC REGISTER)</b>	114.28	..Advanced intelligent billing network (e.g., a billing service control processor)

114.29	...Using more than one advanced intelligent elements (e.g., accessing multiple AIN databases)	130	..At subscriber station
		131	...Time controlled
		132	....Paystation (e.g., escrow control)
115.01	..Interexchange billing operation	133	.Call traffic recording or monitoring
115.02	...Long distance billing		
115.03	...Interfacing with foreign exchange	134	..At central station
		135	...With hardcopy record generation (e.g., ticket printing)
116	...Hardcopy record generating		
117	..Of station on polystation or party line	136	...With display
118	...Identification of station	137	...Trunk usage (e.g., peg count)
119	..Hardcopy record generating (e.g., ticket printing)	138	....All trunks busy metering
		139	...Counting the number of completed connections
120	...With line identification or class of service determination	140	..At subscriber
121.01	..At local exchange carrier (e.g., central switching office)	141	..Mechanical register
121.02	...Discount charge rate or billing plan	142.01	<b>RECEPTION OF CALLING INFORMATION AT SUBSTATION IN WIRELINE COMMUNICATIONS SYSTEM</b>
121.03	...Multiple billing account	142.02	.Blocking caller ID transmission
121.04	...Detail of call history and rates database	142.03	..Using a trigger code
121.05	....Call record modification	142.04	.Extracting call ID from transmitted signal
121.06	...Having network terminating point receiving registration from subscriber terminal	142.05	..Authentication or authorization
		142.06	..Matching and retrieving stored caller ID information from a database
122	...With display	142.07	.Routing an incoming call on multiple lines to a particular appliance (e.g., facsimile, computer, or telephone)
123	...Paystation (e.g., escrow control)		
124	...Pulse counting or accumulating (e.g., "message metering")	142.08	.Call waiting associated with caller ID information
125	....Local or zone	142.09	.Non-assigned telephone number indication
126	....Assembling billing record (e.g., automatic message account (AMA), call detail record (CDR), etc.)	142.1	.Caller location indication (e.g., city, state, etc.)
127.01	.....Having line identification associated with call billing (e.g., automatic number identification (ANI))	142.11	.Caller local time indication
		142.12	.Including master-slave modules, parent-child terminals, or controller-adjunct units
127.02	.....Fraud control or billing restriction	142.13	.Adaptive module coupled to telephone line or telephone device
127.03	.....Billing code or trigger code	142.14	..Format conversion
127.04	.....Pricing a call made from different account (e.g., calling card, credit card)	142.15	.Connecting to an external information processing terminal (e.g., computer)
127.05	.....Billing option selection	142.16	.Having broadband premise equipment (e.g., TV)
127.06	.....Having terminal identification	142.17	.Having display unit
128	...Time of day controlled	142.18	.Including DTMF signal
129	..Manually set (e.g., key and lock)	143	<b>WITH CHECK OPERATED CONTROL (E.G., PAYSTATION)</b>

144.01	.Other than coin	167.03	.At booth (e.g., at theater, gas station, etc.)
144.02	..Collect calling from payphone	167.04	..Having intercom switch
144.03	..Fraud detection in payphone	167.05	.Doorbell system
144.04	..Card reader	167.06	..Having access code
144.05	..Payphone service associated or integrated with other communication device (e.g., computer, fax, etc.)	167.07	..Having remote controlling station (e.g., gate guard or attendant)
144.06	..Special circuitry for processing accounting data	167.08	..Call addressing or announcing
144.07	..Information message notification at paystation	167.11	..Having connection to telephone line
144.08	..Visual display	167.12	..Having display
145	.Fraud or interference prevention	167.13	.Having telephone adaptor system
146	.Coin signalling or control	167.14	.Two-way voice channel
147	..Coin box audit or totalizer	167.15	.Having transducer circuitry
148	..Denomination	168	.Lockout
149	..Post-pay coin collection	169	..Central power source
150	..Coin disposition (i.e., return or collection)	170	.With paging
151	...Upon connection to called station	171	.Having plural stations with selective calling (e.g., master)
152	...Magnet, electromagnet, or relay controlled from central office	172	..With call addressing
153	...Paystation (e.g., controlled by refund key)	173	.With call addressing
154	.At central office	174	.Including body or apparel supported terminal (e.g., headgear)
155	.At terminal station (e.g., coin paystation)	175	..For underwater use (e.g., in diver's suit)
156	<b>MULTI-LINE OR KEY SUBSTATION SYSTEM WITH SELECTIVE SWITCHING AND CENTRAL SWITCHING OFFICE CONNECTION</b>	176	.With central power source
157	.With special service	177	<b>POLYSTATION LINE SYSTEM (I.E., PARTY LINE)</b>
158	..Conferencing	178	.Revertive call
159	.With intercom system	179	.Call alerting (e.g., ringing)
160	..With connection of intercom station to subscriber line	180	..Full selective or tuned (e.g., harmonic)
161	.With exclusion or priority feature (e.g., lockout or privacy)	181	..Semi-selective (e.g., line side, polarized)
162	.Detail of hold circuitry	182	.Automatic or unattended
163	..Electronic	183	..Station identification
164	.Line status indication or call alerting	184	..Lockout
165	.Switching or supervision feature (e.g., common control, digital)	185	.Portable or mobile
166	.Detail of line circuit or line card	186	.Central power source
167.01	<b>PRIVATE (E.G., HOUSE OR INTERCOM) OR SINGLE LINE SYSTEM</b>	187	.Connected to central office
167.02	.At collective house	188	<b>CALL OR TERMINAL ACCESS ALARM OR CONTROL</b>
		189	.Fraud or improper use mitigating or indication (e.g., "blue box", "black box")
		190	.Time out
		191	..At switching center
		192	...Of call duration (e.g., conversation timer)
		193	...Of specific equipment
		194	.Lockout or double use signalling
		195	..In automatic system

- 196 .At switching center
- 197 ..Central office
- 198 ..PBX
- 199 .At substation
- 200 ..Restrictive dialing circuit
- 201.01 **SPECIAL SERVICES**
- 201.02 .Service profile (e.g., calling service)
- 201.03 ..Creation of service (e.g., using object oriented programming, primitive, function)
- 201.04 ..Display arrangement
- 201.05 ..Distribution of service (e.g., downloading, uploading)
- 201.06 .Locating using diverse technology (e.g., using infrared badge, sensor, card reader)
- 201.07 ..Called party
- 201.08 ..Calling party
- 201.09 ..Object
- 201.1 ..Detecting presence or absence of party or object
- 201.11 .Anonymous party (e.g., protection of called or calling party's identity, privacy)
- 201.12 .Provisioning
- 202.01 .Conferencing
- 203.01 ..Operator control
- 204.01 ..Subscriber control
- 205.01 ..Conferencing initiation by single calling station
- 206.01 ..At substation
- 207.01 .Three-way calling
- 207.02 .Service trigger (activation or deactivation)
- 207.03 ..Time (e.g., time of day, expiration of time period, time zone, date)
- 207.04 ..Line or loop condition
- 207.05 ...Busy signal (e.g., off hook)
- 207.06 ...Transition from off-hook to on-hook (e.g., busy to idle, hook flash)
- 207.07 ...Transition from on-hook to off-hook (e.g., idle to busy)
- 207.08 ..No answer (e.g., ringing signal, on-hook, idle)
- 207.09 ....Number of rings
- 207.1 ....Expiration of predetermined time period
- 207.11 ..Service access code
- 207.12 ..Party location
- 207.13 ..Party identification or validation (e.g., personal identification number (PIN))
- 207.14 ..Dialed number identification service (DNIS)
- 207.15 ..Automatic number identification or calling number identification (ANI or CLID)
- 207.16 ..Ringing signal (e.g. having a predetermined cadence or distinctive ring)
- 208.01 .Priority override (e.g., butt-in)
- 209.01 .Repetitive call attempts (e.g., camp-on-busy, retry)
- 210.01 .Reserved call (e.g., return call, call back, scheduled call, reestablished call)
- 210.02 .Call blocking
- 210.03 ..Call from anonymous caller
- 211.01 .Call diversion (e.g., call capture)
- 211.02 ..Call forwarding
- 211.03 ...Sequential ringing
- 211.04 ...Simultaneous ringing
- 211.05 ...Smart card
- 212.01 ..Call transfer
- 213.01 ..Intercept (e.g., dead or changed number)
- 214.01 ..Secretarial or answering service
- 215.01 .Call Waiting
- 216.01 .Abbreviated dialing or direct call (e.g., hot line)
- 217.01 .Audible paging
- 218.01 .Automatic directory service (e.g., on-line)
- 218.02 .Performed by operator (e.g., butt-in, busy verification)
- 219 **PLURAL EXCHANGE NETWORK OR INTERCONNECTION**
- 220.01 .With interexchange network routing
- 221.01 ..Alternate routing
- 221.02 ...Service provider selection (e.g., local or long distance, primary and alternate carriers)
- 221.03 ...Failure (e.g., disaster, overload, blockage)
- 221.04 ....Restoration (e.g., backup, recovery)
- 221.05 ..Based upon historical data
- 221.06 ..Algorithm (e.g., software, computer program)

221.07	...Parameter optimization or enhancement (e.g., capacity or bandwidth)	251	.With generating of call associated substation signal
221.08	..Advanced intelligent network (AIN)	252	..For alerting signal at called station (e.g., ringing)
221.09	...Service control point (SCP, ISCP, external database)	253	...Electronic
221.1	...Signal transfer point (STP, ISTEP)	254	...Associated with connector
221.11	..Adjunct or intelligent peripheral (IP)	255	...With interrupter
221.12	...Service switching point (SSP)	256	..Having automatic or through ringing
221.13	..Local number portability (LNP)	257	..For calling station (e.g., status or progress tones)
221.14	..Routing parameter (e.g., area code, address, service provider identifier)	265.01	.Call distribution to operator
221.15	.Connection call model (e.g., virtual network, displayed models)	265.02	..Automatic call distributor (ACD) system
222	.Toll center	265.03	...Reporting status (e.g., supervisory reporting)
223	..With operator assistance	265.04	...Log-on or log-off of agent
224	.Tandem switching center	265.05	...Agent assignment (e.g., allocation of agent's time to a specific task)
225	.Multi-PBX interconnection	265.06	...Monitoring agent performance (e.g., quality of agent's performance)
226	.Having a manual exchange	265.07	....Speech of agent or customer (e.g., talk time)
227	..With an automatic exchange	265.08	....Average call length
228	...Having signalling to operator	265.09	...Having a multimedia feature (e.g., connected to Internet, E-mail, etc.)
229	.Interexchange signalling	265.1	...Predictive (e.g., anticipating next available agent)
230	..Signalling path distinct from trunk (e.g., CCIS)	265.11	...Routing to available agent
231	..Central office-to-PBX signalling	265.12	...Based on agent's skill (e.g., language spoken by agent)
232	...PBX trunk groups	265.13	...Based on type of call
233	...Direct inward dialing	265.14	...Based on time (e.g., longest waiting agent)
234	..PBX to central office signalling (e.g., direct outward dialing)	266.01	...Call or agent queuing
235	..Voice frequency signalling over trunk	266.02	...Based on type of call
236	..D.C. signalling over trunk	266.03	...Based on time (e.g., age of queued call, time of day, date)
237	...Pulse or digital signalling	266.04	...Overflow (e.g., queue-to-queue, ACD-to-ACD)
238	....Having signalling repeater	266.05	...Split
239	....Using register-sender	266.06	...Estimating or reporting waiting time
240	..Interexchange trunk circuit	266.07	...Call campaign (e.g., script, application, inbound/outbound balancing)
241	..Glare or simultaneous seizure mitigation	266.08	...Predictive algorithm
242	<b>CENTRALIZED SWITCHING SYSTEM</b>	266.09	...Home agent
243	.Class of service determination or transmission	266.1	...Call record
244	..In common control system		
245	.Identification		
246	..Of line or trunk		
247	...With display		
248	..Using matrix		
249	..For nuisance call mitigation		
250	.Four-wire switching		

258	.Switching controlled in response to called station addressing signal	292	....Electronic crosspoint (e.g., solid-state)
259	..Including deflected electron beam switching device or mechanical or optical switching control (e.g., fluidic)	293	..Having line finder
260	..With operator position or completion of call (e.g., dial "0", semiautomatic)	294	...Including electronic element (e.g., tube or semiconductor)
261	...Operator controlled register-sender	295	...Plural
262	...Call extension by operator	296	..With repeater
263	....With call indicator or announcer	297	..Having specified busy-idle test
264	....A to B operator	298	..Direct control
267	...Operator's console	299	...Step-by-step system
268	..Having shared or common switching control	300	....Having plural wiper sets
269	...Distributed control	301	....Having potential control
270	...In-stage or interstage scanning (e.g., link scanning)	302	....Having rotary switch
271	...Having multistage switching	303	....Coordinate system (e.g., X-Y)
272	....Path selection or routing	304	...All relay type
273	.....Alternate routing	305	...Having motor-driven switch
274	.....With busy or idle test	306	..With crosspoint switch detail
275	.....Including marking circuit	307	..With power supply
276	.....End-to-end marking (e.g., self-seeking)	308	.Switching apparatus for connecting calling line to operator's position
277	.....With busy or idle test	309	..Call distribution or queuing
278	....Interstage junctor or "trunk"	310	.Divided central (e.g., communication between switchboards)
279	...Control reliability (e.g., redundancy)	311	..Having signalling path feature
280	...Including registering or storing device for call address signal	312	.Having multiple answering jacks for multiplied line
281	....Conversion between dial pulse and voice frequency signal	313	.Multiple section switchboard
282	....Voice frequency receiver	314	..Auxiliary (e.g., overflow)
283	.....Dual tone multifrequency (DTMF) receiver	315	.With line-signal control
284	....With processor	316	..Spring-jack cut-off
285	....With magnetic memory	317	..Relay cut-off
286	....Signal processing (e.g., dial pulse analysis)	318	..Central power source
287	....Electronic	319	.Single switchboard (e.g., cord circuit)
288	....Register-sender	320	..Switchboard circuit
289	...Translator	321	...Connection to operator's terminal
290	..With time division of control or supervisory signals	322	.Power supply
291	..With detail of crosspoint switching structure (e.g., crossbar)	323	..Power to switching equipment
		324	..Central power source (e.g., common battery, line current feed)
		325	.Structure of equipment
		326	..Wire or cable distribution
		327	...Main or intermediate distribution frame
		328	..Equipment mounting or support
		329	...Allowing movement of equipment (e.g., movable, modular)
		330	..Housing
		331	.Having protective circuit
		332	.Plug and socket

333	<b>CONCENTRATOR OR TRUNK SELECTOR</b>	352	.Substation originated
334	.Concentrator-distributor pair (e.g., line concentrator)	353	..Conversion of signal form
335	.Using crossbar or crosspoint switching	354	..With called number display
336	.With magnet, electromagnet, or relay	355.01	..Repertory or abbreviated call signal generation
337	.With busy-idle test (e.g., idle trunk finder)	355.02	...Call address signal stored in terminal
338	<b>REPEATER (E.G., VOICE FREQUENCY)</b>	355.03	...Including terminal other than telephone
339	.With signal conversion (e.g., dial to DTMF, analog to PCM)	355.04	...Call address signal stored in network
340	.Having line length compensation or equalization	355.05	...Modification of call address signal for abbreviated dialing
341	.Pulse or tone repeater (e.g., electromechanical relay)	355.06	...Modification by other than key input
342	..Electronic (e.g., logic circuitry)	355.07	...Including modification of indicia associated with a call address
343	.Controlled by a pilot or reference signal	355.08	...Including prefix in the call address signal
344	.Component processes bidirectional signals	355.09	...Selection of registered call address signal
345	..Including two-to-four wire conversion or hybrid circuit	355.1	...Selection of multiple call address signals
346	.With frequency discriminator or negative impedance element	356.01	...Including dynamic memory
347	.With gain or attenuation control	357.01	...Insertable control element or circuitry (e.g., card)
348	.Transmission of power to distant repeater	357.02	...Personal computer memory card (PCMCIA)
349	.Having voice frequency transformer	357.03	...Acoustical generation
406.01	<b>ECHO CANCELLATION OR SUPPRESSION</b>	357.04	...Circuitry of call signal generator
406.02	.Combined diverse function	357.05	...Including solid state memory storage
406.03	..Additional signal enhancement (e.g., voice processing or recognition)	358	...By motor driven dial rotating device
406.04	.Disable or inhibit function	359	...Pulse signal generating (e.g., dialing)
406.05	.Residual echo cancellation	360	..Voice frequency band signalling (e.g., reed devices)
406.06	.Using digital signal processing	361	..Electronic (e.g., tone generator)
406.07	..Using attenuator	362	..Pulse signal generator (e.g., rotary dial)
406.08	..Adaptive filtering	363	...Control of motor driven dial rotating device
406.09	...Least mean squares (LMS) algorithm	364	...With nonrotary actuator (e.g., key or slide type)
406.1	...With training sequence	365	...Specified switching contact (e.g., contact spring)
406.11	..Convolution processing	366	...With detail of dial return mechanism (e.g., driving spring, speed governor)
406.12	..Frequency domain analysis	367	...Finger wheel or mechanical adjunct (e.g., finger stop)
406.13	...Fourier analysis		
406.14	...Sub-band analysis		
406.15	..Additional analog processing		
406.16	.Having analog variolossor or attenuator		
350	<b>SUPERVISORY OR CONTROL LINE SIGNALING</b>		
351	.Signalling integrity protection (e.g., voice signal immunity)		

- 368 ..Plural-switch number input device (e.g., keypad)
- 369 ..Detail of mounting of switch pad or dial
- 370 ...In handset
- 371 ..Magneto signalling
- 372 ..Signal reception at substation
- 373.01 ..Incoming call alerting
- 373.02 ...Distinctive or selective alerting
- 373.03 ....Registration of alerting signal in association with incoming signal
- 373.04 ....Recording audio for use as the alerting signal
- 373.05 ....Directing incoming call to local appliance
- 374.01 ...Including musical sound generation
- 374.02 ...Including audible message generation
- 374.03 ...Alerting by other than sight or sound (e.g., vibration)
- 375.01 ...Having electronic call sounder (e.g., tone "ringer")
- 376.01 ...Visual indication of incoming call (e.g., LED or light bulb)
- 376.02 ..Silencing ring signal
- 377 ..Using line or loop condition detection (e.g., line circuit)
- 378 ..With current controlling electromagnetic core device (e.g., Hall-effect device)
- 379 ..With optical link between line and switching system
- 380 ..By bridge circuit
- 381 ..Busy test or make busy
- 382 ..For ring trip or polarity reversal detection
- 383 ..Of plural lines
- 384 ...By scanning
- 385 ..Relayless
- 386 ..Signal receiver (e.g., tone decoder)
- 387.01 **SUBSTATION OR TERMINAL CIRCUITRY**
- 387.02 ..Conversion of signal form (e.g., A/D, frequency or phase)
- 388.01 ..For loudspeaking terminal
- 388.02 ..Speakerphone with build-in microphone
- 388.03 ...Automatic gain or volumn (AGC or AVC)
- 388.04 ..Voice control of transmission direction
- 388.05 ...Voice switching by attenuation/amplification
- 388.06 ...Comparing signal level of receiving and transmitting circuits
- 388.07 ...Controlling acoustic feedback
- 390.01 ..Amplification or attenuation level control
- 390.02 ...Filtering (FIR, HPF, Widrow-Hoff, LMS)
- 390.03 ...Automatic gain control
- 390.04 ...Hybrid circuit
- 391 ..Sidetone control or hybrid circuit (e.g., induction coil)
- 392 ..Suppression (e.g., antisidetone)
- 392.01 ..Noise suppression
- 393 ..Hold circuit
- 394 ..Impedance matching or line equalizing
- 395 ..Amplifying (e.g., AGC or AVC)
- 395.01 ..Power control or detection circuit
- 396 ..Visual signalling (e.g., lamp)
- 397 ..Wire distribution
- 398 **LINE EQUALIZATION OR IMPEDANCE MATCHING**
- 399.01 **SUBSCRIBER LINE OR TRANSMISSION LINE INTERFACE**
- 399.02 ..Circuitry to provide a coder and decoder function
- 400 ..For line length compensation
- 401 ..Voltage boosting circuit
- 402 ..Hybrid circuit
- 403 ..With adjustable balance circuit
- 404 ...Automatic adjustment
- 405 ..Electronic noninductive
- 412 ..Protective circuit
- 413 ..Power supply (e.g., battery feed)
- 413.01 ..Circuitry to provide ringing current supply
- 413.02 ..Network interface device (NLD)
- 413.03 ..Including connection for alternate communication line (e.g., cable)
- 413.04 ..Connection block or module
- 414 **TRANSMISSION LINE CONDITIONING**
- 415 ..Reactance neutralizing
- 416 ..Interference suppression
- 417 ..Anticrossstalk
- 418 **CALL SIGNAL GENERATING (E.G., RINGING OR TONE GENERATOR)**
- 419 **TERMINAL**

420.01	..Having loudspeaking conversation capability (e.g., hands-free type or speakerphone)	434	..Specified terminal configuration (e.g., novelty type)
420.02	..Hands-free loudspeaker feature	435	..Wall set or convertible type
420.03	..Hands-free microphone feature	436	..Desk set
420.04	..Hands-free accessory or attachment	437	..Protective structure
421	..Having muting	438	...Of cord or connector
422	..Switch or switch actuator structure	439	...Antiseptic
423	..Line selection	440	..Casing or enclosure, per se
424	..Receiver or handset position responsive (e.g., hookswitch)	441	<b>TERMINAL ACCESSORY OR AUXILIARY EQUIPMENT</b>
425	..With mechanism for latching hookswitch or plunger against motion	442	.With circuit connection to terminal
426	...Movable holder for receiver or handset	443	.Including coupler (e.g., inductive)
427	...Having plunger and lever linkage	444	..Acoustic
428.01	..Housing or housing component	445	.Locking device
428.02	..Handset or headset combined with telephone base	446	.Telephone receiver support
428.03	..Display on telephone base	447	.Attachable to terminal housing
428.04	..Base having detachable accessory	448	..Hookswitch operator
429	..Having distinct circuitry support structure (e.g., circuit board)	449	..Handset holder (e.g., shoulder rest)
430	..Body supported (e.g., headgear)	450	..Clips onto terminal structure
431	..Separate housings for earphone and microphone (e.g., candlestick type)	451	.Protective structure
433.01	..Handset structure	452	..Antiseptic, disinfecting, or disposable
433.02	...Speaker mounting (i.e., speaker phone feature)	453	.Hood or enclosure (e.g., booth)
433.03	..Microphone mounting	454	.Support or stand
433.04	...Display on handset	455	..Handset holder
433.05	...Connector	456	.Dialing tool
433.06	...Button or switch having specific function	457	<b>MISCELLANEOUS</b>
433.07	...Keypad		
433.08	...Battery		
433.09	...Card (e.g., SIM or magnetic strip card)		
433.1	...Handset having special feature (e.g., wrist watch)		
433.11	..Moveable or removeable element (e.g., cover)		
433.12	...Slideable mechanism		
433.13	...Rotatable mechanism (e.g., hinge)		
432	..Loudspeaking set		
			<b><u>CROSS-REFERENCE ART COLLECTIONS</u></b>
		900	<b>INTERNET (E.G., INTERNET PHONE, WEBPHONE, INTERNET-BASED TELEPHONY)</b>
		901	<b>VIRTUAL NETWORKS OR VIRTUAL PRIVATE NETWORKS</b>
		902	<b>AUTO-SWITCH FOR AN INCOMING VOICE DATA, OR FAX TELEPHONE CALL (E.G., COMP/FAX/TEL)</b>
		903	<b>PASSWORD</b>
		904	<b>AUTO-CALLING</b>
		905	<b>FAX MAIL</b>
		906	<b>TOUCHTONE MESSAGE TRANSMISSION</b>
		907	<b>SPEECH RECOGNITION VIA TELEPHONE SYSTEM OR COMPONENT</b>
		908	<b>MULTIMEDIA</b>
		909	<b>ALTERNATIVES</b>
		910	<b>BAR CODE OR OPTICAL CHARACTER READER WITH TELEPHONE</b>

911 **DISTINCTIVE RINGING**  
 912 **GEOGRAPHICALLY ADAPTIVE**  
 913 **PERSON LOCATOR OR PERSON-SPECIFIC**  
 914 **PROGRAMMABLE TELEPHONE COMPONENT**  
 915 . "Soft" key  
 916 **TOUCH SCREEN ASSOCIATED WITH**  
**TELEPHONE SET**  
 917 **VOICE MENUS**

**FOREIGN ART COLLECTIONS****FOR 000 CLASS-RELATED FOREIGN DOCUMENTS**

Any foreign patents or non-patent literature from subclasses that have been reclassified have been transferred directly to FOR Collections listed below. These Collections contain ONLY foreign patents or non-patent literature. The parenthetical references in the Collection titles refer to the abolished subclasses from which these Collections were derived.

**FOR 100 HAVING NEAR FIELD LINK (E.G., CAPACITIVE, INDUCTIVE) (379/55)**  
**FOR 101 HAVING ELECTROMAGNETIC LINK FOR SPEECH OR PAGING SIGNAL (E.G., LIGHT WAVE LINK) (379/56)**  
**FOR 112 TELEPHONE LINE OR SYSTEM COMBINED WITH DIVERSE ELECTRICAL SYSTEM OR SIGNALLING (E.G., COMPOSITE) (379/90)**  
 FOR 113 .Credit authorization (379/91)  
 FOR 114 .Polling (e.g., audience survey) (379/92)  
 FOR 115 .With transmission of a digital message signal over a telephone line (379/93)  
 FOR 116 ..Including switching station (379/94)  
 FOR 117 ..Access restricting (379/95)  
 FOR 118 ..Including terminal for display of digital information (379/96)  
 FOR 119 ..By voice frequency signal (e.g., tone code) (379/97)  
 FOR 120 ...By modulated audio tone (379/98)  
 FOR 121 ...Having acoustic link (379/99)

FOR 122 .To produce visual-graphic copy reproduction (e.g., facsimile) (379/100)  
 FOR 123 .Audio program distribution (379/101)  
 FOR 124 .Remote control (379/102)  
 FOR 125 ..Of entrance or exit lock (379/103)  
 FOR 126 ..With indication (379/104)  
 FOR 127 ..From terminal (379/105)  
 FOR 128 .Remote indication over telephone line (e.g., telemetry) (379/106)  
 FOR 129 ..Meter reading (379/107)  
 FOR 130 .Telegraphy (379/108)  
 FOR 131 ..Over telephone line (379/109)  
 FOR 132 **COMPOSITE SUBSTATION OR TERMINAL (E.G., HAVING CALCULATOR, RADIO) (379/110)**  
**FOR 133 WITH AUDIO MESSAGE STORAGE AND RETRIEVAL (379/67)**  
 FOR 134 .Stored in digital form (379/88)  
 FOR 135 ..Subscriber control of central office message storage or retrieval (379/89)  
 FOR 136 .DIAGNOSTIC TESTING, MALFUNCTION, INDICATION, OR ELECTRICAL CONDITION MEASUREMENT (379/1)  
 FOR 137 ..By loopback (379/5)  
 FOR 138 ..By analysis of injected tone signal (379/6)  
 FOR 139 ..By automatic testing sequence (e.g., programmable, scanning) (379/10)  
 FOR 140 .Of automatic switching equipment (379/15)  
 FOR 141 ..Fault detection or location (e.g., continuity, leakage) (379/26)  
 FOR 142 .Of subscriber loop or terminal (379/27)  
 FOR 143 ..Terminal arrangement to enable remote testing (e.g., testing interface) (379/29)  
 FOR 144 .Indication of nonstandard condition of telephone equipment (379/32)  
 FOR 145 ..SERVICE MONITORING OR OBSERVATION (379/34)  
 FOR 146 .Computer or processor control (379/112)  
 FOR 147 ..Call traffic recording (379/113)  
 FOR 148 ..Call charge metering or monitoring (379/114)

- FOR 149 ...Interexchange operations (379/115)
- FOR 150 **AT CENTRAL OFFICE (379/121)**
- FOR 151 ..Having line identification (e.g., automatic number identification-"ANI") (379/127)
- FOR 152 **WITH CALLING NUMBER DISPLAY OR RECORDING AT CALLED SUBSTATION (379/142)**
- FOR 153 ..Other than coin (379/144)
- FOR 154 ..PRIVATE (E.G., HOUSE OR INTERCOM) OR SINGLE LINE SYSTEM (379/167)
- FOR 155 ..SPECIAL SERVICES (379/201)
- FOR 156 ..Conferencing (379/202)
- FOR 157 ..Operator control (379/203)
- FOR 158 ..Subscriber control (379/204)
- FOR 159 ..Conference initiation by single calling station (379/205)
- FOR 160 ...At substation (379/206)
- FOR 161 ...At plural exchange (379/207)
- FOR 162 ..Priority override (e.g., butt-in) (379/208)
- FOR 163 ..Repetitive call attempts (e.g., camp-on-busy, retry) (379/209)
- FOR 164 ...Call diversion (e.g., call capture) (379/210)
- FOR 165 ..Call forwarding (379/211)
- FOR 166 ...Call transfer (379/212)
- FOR 167 ...Intercept (e.g., dead or changed number) (379/213)
- FOR 168 ...Secretarial or answering service (379/214)
- FOR 169 ..Call waiting (379/215)
- FOR 170 ..Abbreviated dialing or direct call (e.g., hot line) (379/216)
- FOR 171 ..Audible paging (379/217)
- FOR 172 ..Performed by operator (e.g., butt-in, busy verification) (379/218)
- FOR 173 ..With interexchange network routing (379/220)
- FOR 174 ..Alternate routing (379/221)
- FOR 175 ..Call distribution to operator (379/265)
- FOR 176 ..Call queuing (379/266)
- FOR 177 ..Repertory or abbreviated call signal generation (379/355)
- FOR 178 ..With dynamic memory (379/356)
- FOR 179 ...Insertable control element or circuitry (e.g., card) (379/357)
- FOR 180 ..Incoming call alerting (e.g., ringing) (379/373)
- FOR 181 ..With music or audible message generation (379/374)
- FOR 182 ..With electronic call sounder (e.g., tone "ringer") (379/375)
- FOR 183 ...With visual indication of incoming call (379/376)
- FOR 184 **SUBSTATION OR TERMINAL CIRCUITRY (379/387)**
- FOR 185 ..For loudspeaking terminal (379/388)
- FOR 186 ..With circuitry for voice control of transmission direction (379/389)
- FOR 187 ..With amplification or attenuation level control (379/390)
- FOR 188 **SUBSCRIBER LINE OR TRANSMISSION LINE INTERFACE (379/399)**
- FOR 189 ..Echo suppression, antisinging, or reverse path blocking (379/406)
- FOR 190 ..Disable or inhibit (379/407)
- FOR 191 ..Control by pilot frequency signal (379/408)
- FOR 192 ..Having varioloser or attenuator (379/409)
- FOR 193 ..Echo cancellation (e.g., phase opposition) (379/410)
- FOR 194 ...Having transversal filter (379/411)
- FOR 195 ..Having loudspeaking conversation capability (e.g., hands-free type or speakerphone) (379/420)
- FOR 196 ..Housing or housing component (379/428)
- FOR 197 ..Handset structure (379/433)